

1           CLAIMS

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3       1. A method comprising:

4           detecting, in a system for streaming a plurality of data streams from a  
5 server to a client, a potential overburdening of the system;

6           selecting at least one of the plurality of data streams in response to  
7 detecting the potential overburdening of the system; and

8           altering playback of the at least one data stream to avoid overburdening the  
9 system.

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11       2. A method as recited in claim 1, wherein the detecting comprises  
12 detecting a potential overburdening of the system by exceeding a server to client  
13 bandwidth devoted to the plurality of data streams.

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15       3. A method as recited in claim 1, wherein the detecting comprises  
16 detecting a potential overburdening of the system by exceeding a processing  
17 capacity of the client.

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19       4. A method as recited in claim 1, wherein the altering comprises  
20 pausing the at least one data stream.

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22       5. A method as recited in claim 1, wherein the altering comprises  
23 ceasing time-scale modification of the at least one stream at the client and  
24 beginning time-scale modification of the at least one stream at the server.

1           6. A method as recited in claim 1, wherein the altering comprises  
2 reducing a quality of the at least one stream.

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4           7. A method as recited in claim 1, wherein the detecting comprises  
5 monitoring the system for the potential overburdening in response to receiving a  
6 new request for a new playback speed for the plurality of data streams.

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8           8. A method as recited in claim 1, further comprising:  
9              detecting when excess capacity is available in the system; and  
10             altering playback of at least one of the plurality of data streams in response  
11 to detecting the excess capacity.

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13           9. A method as recited in claim 1, further comprising allowing a user to  
14 modify a set of rules used in selecting the at least one of the plurality of data  
15 streams.

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17           10. A method as recited in claim 1, further comprising allowing a user  
18 to modify a set of rules used to determine the manner in which playback of the at  
19 least one data stream is altered.

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21           11. A method as recited in claim 1, wherein the plurality of data streams  
22 include one or more of an image stream, a text stream, and an animation stream.

1           **12.** One or more computer-readable memories containing a computer  
2 program that is executable by a processor to perform the method recited in claim  
3 1.  
4

5           **13.** A system comprising:  
6           a client computer coupled to a network;  
7           a server computer coupled to transmit a plurality of individual data streams  
8 to the client computer via the network; and

9           wherein the client computer is to detect when bandwidth from the server to  
10 the client computer that is allotted to transmitting the plurality of individual data  
11 streams would be exceeded and take action to prevent the allotted bandwidth from  
12 being exceeded.

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14           **14.** A system as recited in claim 13, wherein the network comprises the  
15 Internet.

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17           **15.** A system as recited in claim 13, wherein the server is to transmit the  
18 plurality of individual data streams to the client computer as a composite media  
19 stream.

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21           **16.** A system as recited in claim 13, wherein the client computer is to  
22 prevent the allotted bandwidth from being exceeded by transferring time-scale  
23 modification responsibility from a control component at the client computer to a  
24 control component at the server computer.

1       **17.** A system as recited in claim 13, wherein the client computer is to  
2 prevent the allotted bandwidth from being exceeded by communicating to the  
3 server computer to cease transmitting one of the plurality of individual data  
4 streams.

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6       **18.** A system as recited in claim 13, wherein the client computer is to  
7 prevent the allotted bandwidth from being exceeded by communicating to the  
8 server computer to switch to a lower-resolution version of one of the plurality of  
9 individual data streams.

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11      **19.** A system as recited in claim 13, wherein the plurality of individual  
12 data streams include one or more of an image stream, a text stream, and an  
13 animation stream.

14

15      **20.** A server computer comprising:  
16           a bus;  
17           a memory system, coupled to the bus, to store a plurality of instructions;  
18           and  
19           a processor, coupled to the bus, to execute the plurality of instructions to:

20           receive an indication that time-scale modification for a data stream  
21           that was previously performed at a client computer should now be  
22           performed at the server computer, and

23           transmit a time-scale modified data stream to the client computer.

1           **21.** A server computer as recited in claim 20, wherein the processor is  
2 further to select one of a plurality of pre-stored versions of the data stream to  
3 transmit as the time-scale modified data stream.

4

5           **22.** A server computer as recited in claim 20, wherein the processor is  
6 further to generate the time-scale modified data stream by dynamically time-scale  
7 modifying an original version of the data stream.

8

9           **23.** A server computer as recited in claim 20, wherein the data stream  
10 comprises one or more of an image stream, a text stream, and an animation stream.

11

12           **24.** An apparatus comprising:  
13              a master control component to maintain a master timeline for a multimedia  
14 presentation; and  
15              a plurality of individual stream controls corresponding to individual data  
16 streams for the multimedia presentation, wherein each of the plurality of  
17 individual stream controls is to maintain a timeline for the corresponding  
18 individual data stream.

19

20           **25.** An apparatus as recited in claim 24, wherein the master control  
21 component is also to receive a user request for a new playback speed and  
22 communicate the new playback speed to the plurality of individual stream  
23 controls.

1           **26.** An apparatus as recited in claim 25, wherein the master control  
2 component is to communicate the new playback speed to the plurality of  
3 individual stream controls by sending a message to each of the plurality of  
4 individual stream controls.

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6           **27.** An apparatus as recited in claim 24, wherein each of the plurality of  
7 individual stream controls is to monitor the master timeline and adjust the timeline  
8 maintained by the stream control to maintain synchronization with the master  
9 timeline.

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11          **28.** An apparatus as recited in claim 24, wherein the individual data  
12 streams include one or more of an image stream, a text stream, and an animation  
13 stream.

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15          **29.** One or more computer-readable media having stored thereon a  
16 computer program that, when executed by one or more processors, causes the one  
17 or more processors to perform functions including:

18           receiving a user request at a client for a new playback speed of multimedia  
19 content being streamed as a plurality of individual streams to the client; and

20           modifying the playback of each stream of the multimedia content in  
21 accordance with the new playback speed.

1           **30.** One or more computer-readable media as recited in claim 29,  
2 wherein the computer program further causes the one or more processors to  
3 perform functions including sending a message to each of a plurality of individual  
4 stream controls, the message indicating the new playback speed.

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6           **31.** One or more computer-readable media as recited in claim 30,  
7 wherein the function of sending a message comprises a function of sending the  
8 message to an individual stream control located at a server streaming the  
9 individual stream of the multimedia content.

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11          **32.** One or more computer-readable media as recited in claim 29,  
12 wherein the computer program further causes the one or more processors to  
13 perform functions including each of a plurality of individual stream controls  
14 corresponding to the plurality of individual streams monitoring a master clock and  
15 adjusting a local clock to keep synchronized with the master clock.

16

17          **33.** One or more computer-readable media as recited in claim 29,  
18 wherein the computer program further causes the one or more processors to  
19 perform functions including performing, by an independent stream control located  
20 at the client and corresponding to one of the plurality of individual streams, time-  
21 scale modification of the one stream in accordance with the new playback speed.

1           **34.** One or more computer-readable media as recited in claim 29,  
2 wherein the multimedia content includes one or more of an image stream, a text  
3 stream, and an animation stream.

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5           **35.** A method comprising:  
6           receiving streaming text from a server;  
7           receiving a user request to change a playback speed of the streaming text;  
8 and  
9           altering the playback speed of the streaming text in accordance with the  
10 user request.

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12           **36.** A method as recited in claim 35, further comprising:  
13           detecting a potential overburdening of a system receiving the streaming  
14 text; and  
15           altering playback of the streaming text to avoid overburdening the system.

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17           **37.** A method as recited in claim 35, wherein the receiving the user  
18 request comprises receiving a user request to increase the playback speed of the  
19 streaming text.

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21           **38.** A method as recited in claim 35, wherein the receiving the user  
22 request comprises receiving a user request to decrease the playback speed of the  
23 streaming text.

1           **39.** A method as recited in claim 35, wherein the altering comprises  
2 performing linear time-scale modification in accordance with the user request.

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4           **40.** A method as recited in claim 35, wherein the altering comprises  
5 performing non-linear time-scale modification in accordance with the user request.

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7           **41.** One or more computer-readable memories containing a computer  
8 program that is executable by a processor to perform the method recited in claim  
9 35.

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11          **42.** A method comprising:  
12           receiving a plurality of images as streaming image data from a server;  
13           receiving a user request to change a playback speed of the plurality of  
14 images; and  
15           altering the playback speed of the plurality of images in accordance with  
16 the user request.

17

18          **43.** A method as recited in claim 42, further comprising:  
19           detecting a potential overburdening of a system receiving the streaming  
20 image data; and  
21           altering playback of the streaming image data to avoid overburdening the  
22 system.

1           **44.** A method as recited in claim 42, wherein the altering comprises  
2 performing linear time-scale modification in accordance with the user request.

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4           **45.** A method as recited in claim 42, wherein the altering comprises  
5 performing non-linear time-scale modification in accordance with the user request.

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7           **46.** A method as recited in claim 42, further comprising:  
8 receiving each of the plurality of images as a plurality of layers; and  
9 wherein the altering comprises, for each of the plurality of images, reducing  
10 the number of the plurality of layers that are used to render the image.

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12          **47.** A method as recited in claim 42, further comprising receiving  
13 timeline data corresponding to the plurality of images, the timeline data indicating  
14 when the plurality of images are to be rendered.

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16          **48.** One or more computer-readable memories containing a computer  
17 program that is executable by a processor to perform the method recited in claim  
18 42.